Improving Port Efficiency

Michael DiBernardo | March 21, 2018
Port Highlights Video Here
Challenges Faced by Supply Chain Stakeholders

- Lack of advance visibility to cargo in transit
- Siloed information
- Access multiple web sites for information
- Not knowing cargo status
- Unpredictable and unreliable visit times by motor carriers
Port Optimizer Data Solutions Portal

Collaborative partnership with Port of Los Angeles and GE Transportation

Increase Supply Chain Efficiencies by digitizing ocean transportation

Port Information Portal

- Dynamic window into port and cargo information
- Operational insights for improved planning
- Advance information; 10+ days faster access to integrated data
- Information from US Customs, Shipping Lines and Marine Terminal
Features

- Unified Information Portal
- Cloud-based
- Flexible, multi-platform access
- Predictive analytics and data driven insights
- Vessel tracking, vessel operation status, container tracking, and equipment management
- Persona-based visualization
- Secured, channeled access
Benefits

- Enhances supply chain performance and predictability
- Delivering real time data drive insights through a single portal
- Integrated data across the port ecosystem- combines machine learning and deep domain expertise
- Allows for supply chain monitoring and response to dynamic conditions
- Aligns people and resources
- Pro-actively communicate across functions- enabling maximum port throughput and delivery performance
Outcomes

• Increased visibility
• Predictability
• Productivity
• Collaboration
• Increase cargo velocity
• Improve service delivery
• Environmental benefits
Pilot

• Pilot Scope (5 months development, 2 months usage - May 2017-July 2017)
  • 1 Marine Terminal (APM Terminals)
  • 2 Vessel Operators (Maersk, MSC)
  • 10 Beneficial Cargo Owners (BCOs)
  • 5 Trucking Companies
Pilot Results

93% agree that the data in the portal is easy to understand and valuable

94% agree that the portal is easy to access and visually appealing

What would users like to see in the next version of the portal?

- More terminals and more shipping lines
- More granularity on container details including dates for customs/holds information
- Ability to schedule appointments across terminals
- Would like the ability to export container details from any portion of the portal
- On-dock/Off-dock rail info and the ability to see wheeled and grounded by terminal/shipping line
Key information highlighted at the top for quick and easy access.

Mouse over for specific information.

Ability to search by multiple criteria to view data specifically how you want.
Highly sortable views into container data

Click any element to view presorted container specific data
### Vessel Unload Status

<table>
<thead>
<tr>
<th>Vessel Name</th>
<th>Vessel ETA</th>
<th>PROGRESS</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>APL PHILIPPINES</td>
<td>02/17/2018 06:14</td>
<td>0 / 3178 Containers</td>
<td>Yet to start</td>
</tr>
<tr>
<td>HYUNDAI SHANGHAI</td>
<td>02/17/2018 11:32</td>
<td>0 / 3259 Containers</td>
<td>Yet to start</td>
</tr>
<tr>
<td>COSCO OCEANIA</td>
<td>02/16/2018 13:30</td>
<td>2384 / 3154 Containers</td>
<td>76%</td>
</tr>
<tr>
<td>SEALAND GUAYAQUIL</td>
<td>02/16/2018 13:30</td>
<td>3004 / 3004 Containers</td>
<td>100%</td>
</tr>
<tr>
<td>MAERSK EDMONTON</td>
<td>02/16/2018 13:30</td>
<td>2872 / 3852 Containers</td>
<td>75%</td>
</tr>
<tr>
<td>EVER LISSOME</td>
<td>02/16/2018 13:30</td>
<td>2982 / 3933 Containers</td>
<td>76%</td>
</tr>
</tbody>
</table>

Rows per page 6

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See the ETA and ETD of vessels coming into the terminal

View the unload status of a vessel in real-time as the vessel is being worked

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Local versus Rail Information

Inbound container traffic is split into local (Truck) movements versus what will depart on rail

Vessel Forecast

Containers divided by Vessel, size, and local versus rail

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Containers</th>
<th>Containers</th>
<th>Containers</th>
<th>Containers</th>
<th>Containers</th>
<th>Containers</th>
<th>Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAERSK ESMERALDAS</td>
<td>1819</td>
<td>3039</td>
<td>1474</td>
<td>3538</td>
<td>1362</td>
<td>865</td>
<td>1391</td>
</tr>
<tr>
<td>MAERSK ENPING</td>
<td>1441</td>
<td>2367</td>
<td>79</td>
<td>678</td>
<td>1073</td>
<td>109</td>
<td>1118</td>
</tr>
<tr>
<td>GRETE MAERSK</td>
<td>58</td>
<td>267</td>
<td>164</td>
<td>100</td>
<td>155</td>
<td>47</td>
<td>128</td>
</tr>
<tr>
<td>MAERSK EVORA</td>
<td>220</td>
<td>554</td>
<td>1227</td>
<td>645</td>
<td>100</td>
<td>100</td>
<td>155</td>
</tr>
<tr>
<td>MSC ARIANE</td>
<td>118</td>
<td>37</td>
<td>109</td>
<td>37</td>
<td>1118</td>
<td>16</td>
<td>128</td>
</tr>
<tr>
<td>MAERSK ALDAS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
# View Data By Different Categories

Depending on user type, container data can be sorted by Consignee or Truck/Dray provider allowing users to see their containers at an aggregated level.

<table>
<thead>
<tr>
<th>Trucking Company</th>
<th>Inbound Volume</th>
<th>Current Status (Number of Containers)</th>
<th>ABC Terminal</th>
<th>All Truckers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMI Trucking</td>
<td>568</td>
<td><a href="#">494</a> on vessel, <a href="#">173</a> awaiting clearance</td>
<td>394</td>
<td>173</td>
</tr>
<tr>
<td>Knight Transportation</td>
<td>491</td>
<td><a href="#">448</a> on vessel, <a href="#">10</a> awaiting clearance, <a href="#">33</a> available for appointment</td>
<td>448</td>
<td>10, 33</td>
</tr>
<tr>
<td>TSI</td>
<td>447</td>
<td><a href="#">426</a> on vessel, <a href="#">10</a> awaiting clearance, <a href="#">11</a> available for appointment</td>
<td>426</td>
<td>10, 11</td>
</tr>
<tr>
<td>Triangle Group</td>
<td>445</td>
<td><a href="#">370</a> on vessel, <a href="#">47</a> awaiting clearance, <a href="#">28</a> available for appointment</td>
<td>370</td>
<td>47, 28</td>
</tr>
</tbody>
</table>

Inbound volume sorted by Consignee or Truck/Dray provider

What’s inbound, has a hold, or is available
Next steps & Scaling Plan

Q1/Q2 2018
- Onboarding Lines and Terminals
- Data development
- Wider stakeholder engagement

Q3/Q4 2018
- Implementations
- User acceptance
- Feature/function build-out

2019
- Drive efficiency gains
- Advanced Analytics
- Continuous improvements

Usage Growth
THANK YOU